Bhavana CK

1BM20CS403

CSE-4A

Consider the following schema:

SUPPLIERS(sid: integer, sname: string, address: string)

PARTS(pid: integer, pname: string, color: string)

CATALOG(sid: integer, pid: integer, cost: real)

The Catalog relation lists the prices charged for parts by Suppliers.

Write the following queries in SQL:

i)Find the pnames of parts for which there is some supplier.

ii)Find the snames of suppliers who supply every part.

iii)Find the snames of suppliers who supply every red part.

iv)Find the pnames of parts supplied by Acme Widget Suppliers and by no one else.

v)Find the sids of suppliers who charge more for some part than the average cost of that part (averaged over all the suppliers who supply that part).

vi)For each part, find the sname of the supplier who charges the most for that part.

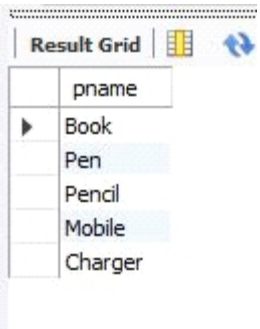
```
create database supplier;

use supplier;


create table suppliers(

sid int not null,

sname varchar(20) not null,

address varchar(20) not null,
```

```
primary key(sid)
);

create table parts(
pid int not null,
pname varchar(20) not null,
color varchar(10) not null,
primary key(pid)
);

create table catalog(
sid int not null,
pid int not null,
cost real not null,
primary key(sid,pid),
foreign key(sid)references suppliers(sid),
foreign key(pid)references parts(pid)
);

insert into suppliers
values(10001,"Acme Widget","Bangalore"),
(10002,"Johns","Kolkata"),
(10003,"Vimal","Mumbai"),
(10004,"Reliance","Delhi");
```

```
insert into parts
values (20001,"Book","Red"),
(20002,"Pen","Red"),
(20003,"Pencil","Green"),
(20004,"Mobile","Green"),
(20005,"Charger","Black");

insert into catalog
values(10001,20001,10),
(10001,20002,10),
(10001,20003,30),
(10001,20004,10),
(10001,20005,10),
(10002,20001,10),
(10002,20002,20),
(10003,20003,30),
(10004,20003,40);
```

i)---Find the pnames of parts for which there is some supplier.

```
select distinct pname from parts,catalog
where catalog.pid= parts.pid and sid is not null;
```



pname
Book
Pen
Pencil
Mobile
Charger

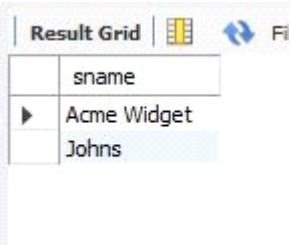
ii) ---Find the snames of suppliers who supply every part.

```
select suppliers.sname,catalog.sid from suppliers,catalog

where suppliers.sid = catalog.sid

group by suppliers.sname

having count(catalog.sid)=(select count(pid) from parts);
```

sname	sid
Acme Widget	10001

iii) ---Find the snames of suppliers who supply every red part.

```
select distinct s.sname from suppliers s,catalog c

where s.sid=c.sid and c.pid in(select pid from parts where color ="Red");
```



sname
Acme Widget
Johns

iv) ---Find the pnames of parts supplied by Acme Widget Suppliers and by no one else.

```
select pname from parts ,catalog

where parts.pid=catalog.pid and sid in (select sid from suppliers where sname ="Acme Widget");
```

Result Grid

	pname
▶	Book
	Pen
	Pencil
	Mobile
	Charger

v) ---Find the sids of suppliers who charge more for some part than the average cost of that part (averaged over all the suppliers who supply that part).

```
select c.sid from catalog c

where    c.cost>(select avg(cost)from catalog where pid = c.pid);
```

Result Grid

	sid
▶	10002
	10004

vi) ---For each part, find the sname of the supplier who charges the most for that part.

```
select c.pid,s.sname from suppliers s,catalog c

where s.sid =c.sid and c.cost =(select max(cost) from catalog where pid =c.pid);
```

Result Grid | Filter Ro

	pid	sname
▶	20001	Acme Widget
	20004	Acme Widget
	20005	Acme Widget
	20001	Johns
	20002	Johns
	20003	Reliance